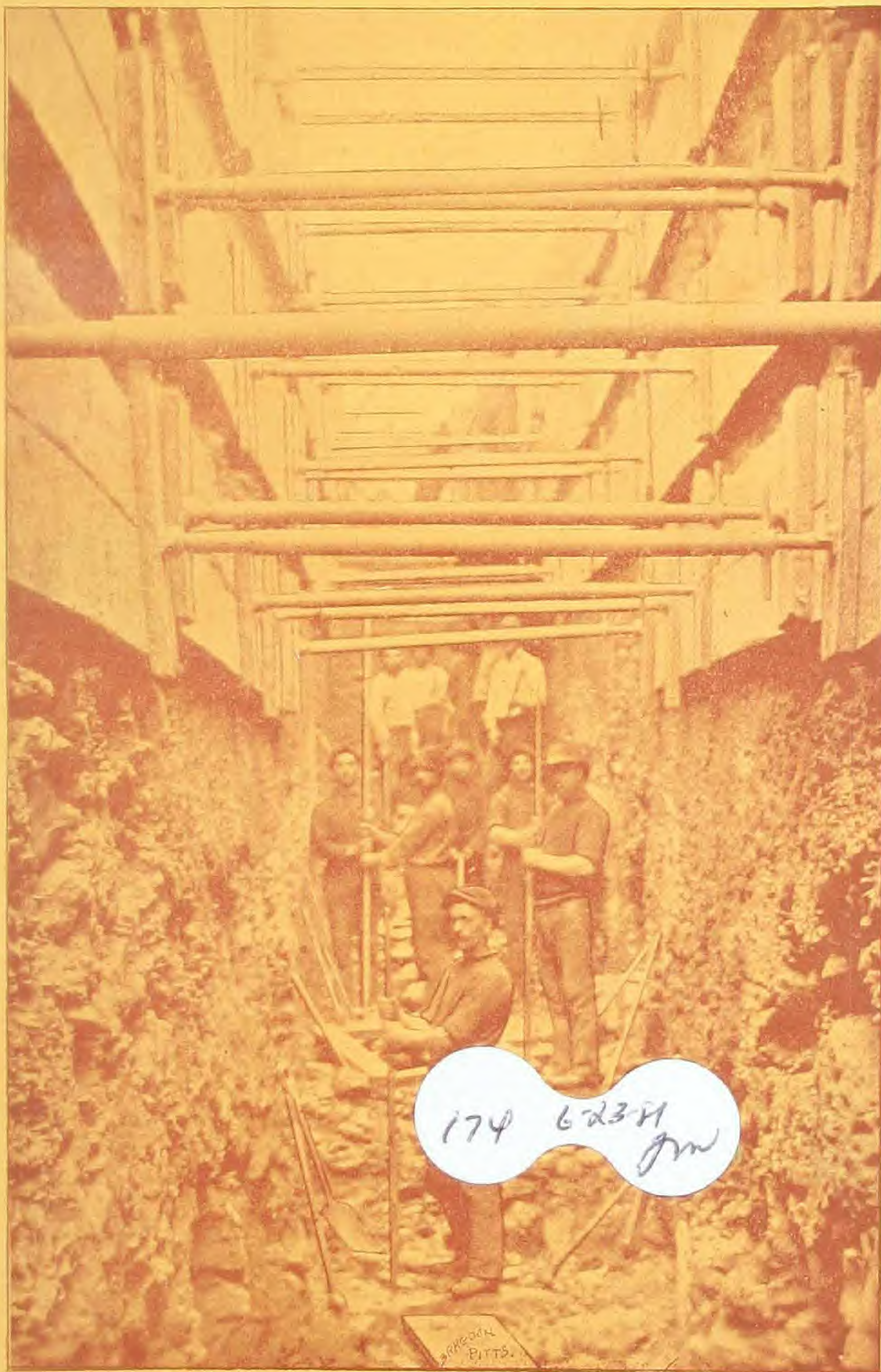


GE-159

Extensible Sewer Brace,

For Supporting the Sides of Excavations.



(See Description of above Cut on Page 2.)

The Dunn Manufacturing Company, Limited
Penn Building, Pittsburg, Pa., U. S. A.

Press of Shaw Bros., 10 & 12 Sixth St., Pittsburg.

JANUARY, 1895.

THE
DUNN MANUFACTURING COMPANY,
LIMITED,

SOLE MANUFACTURERS OF THE

Extensible Sewer Brace

FOR

SUPPORTING SIDES OF EXCAVATIONS.

United States Patent, July 8th, 1890.

United States Patent, July 28th, 1891.

United States Patent, Nov. 1st, 1892.

Canadian Patent, June 18th, 1891.

OTHER PATENTS PENDING.

SPECIAL TOOLS FOR CONTRACTORS.

PENN BUILDING, PITTSBURG, PENNA.,

U. S. A.

TO OUR PATRONS.

TO meet the growing demand of our business, we have enlarged our already complete works for the manufacture of the Extensible Sewer Braces and other Special Tools for Contractors.

After twelve years of practical experience in all kinds of contract work, and especially sewer work, our Mr. Dunn, realizing the necessity of having better tools, and a safer, more economical and more durable Brace, devised and patented the Extensible Sewer Brace, as herein described, which is now used by nearly all prominent contractors in the United States and Canada.

Knowing that our Brace is *superior* to any other, we will, upon request, send one free to anyone using another make, that they may be compared in actual work.

Every contractor should be well supplied with them for the following reasons, namely:

1st. The amount of labor saved will soon pay for them.

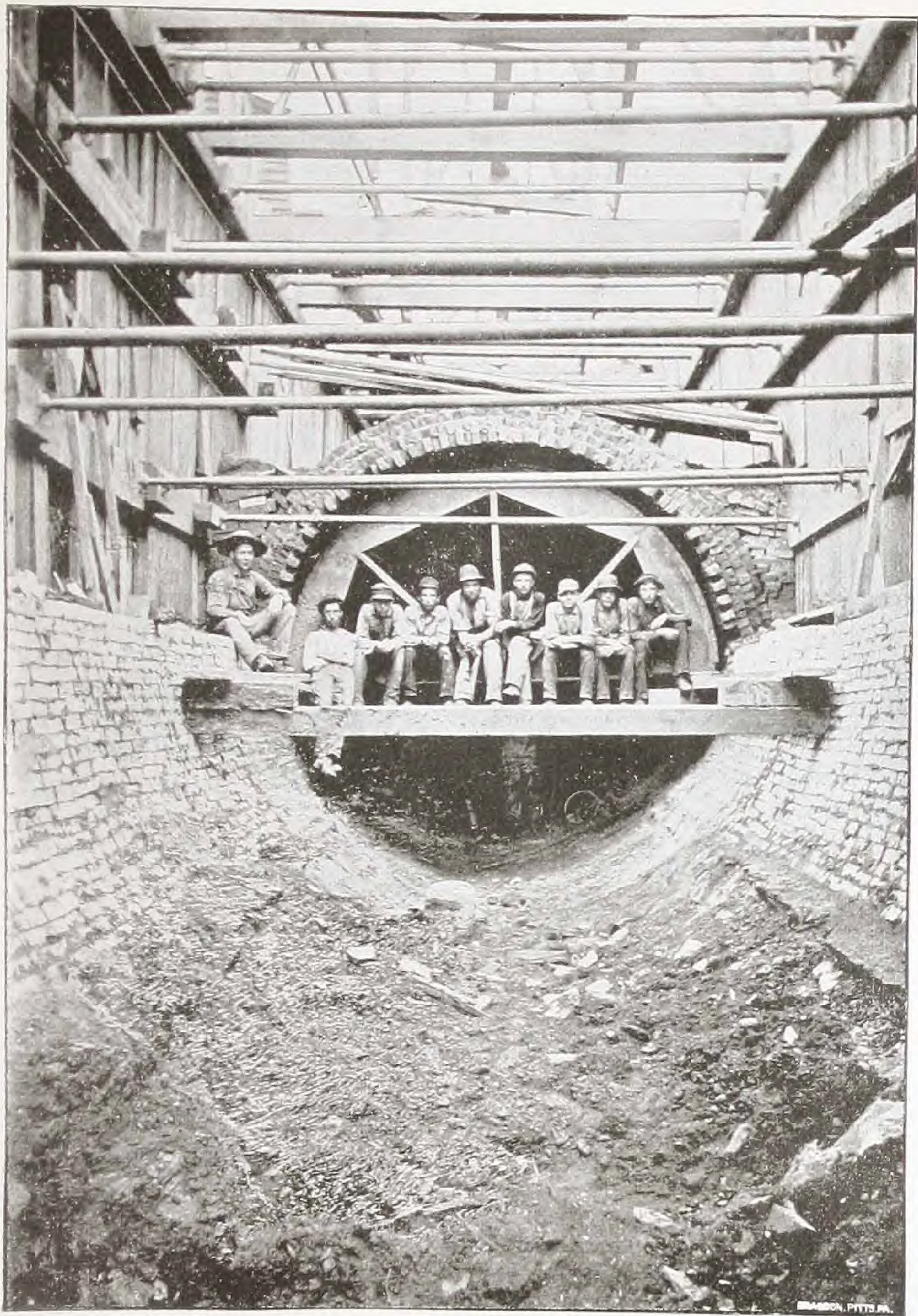
2d. They are easily adjusted, as they can be extended from eight to fourteen inches, and by removing the barrel and substituting a longer or shorter one, you can have any length of Brace desired.

3d. The Ball Joint, as shown in Cut No. 3, page 4, permits the shoe to adjust itself to any angle the planking may assume, and at the same time gives it an equal bearing.

4th. Blasting can be done without injury to braces or shoring, as shown in Cut on front page, which is taken from a photograph of the Superior Avenue (Allegheny, Pa.) brick sewer 6 feet in diameter and 32 feet deep, the upper 20 feet of which was made ground, and the lower 12 feet was rock.

5th. They are invaluable in scaffolding, as they can be moved from place to place without loss of time, and while in use the men working under them are in perfect safety.

Our lightest Brace, for narrow trenches, is made with $1\frac{1}{2}$ inch gas pipe, and in lengths from 16 inches to $4\frac{1}{2}$ feet. Our medium Brace is made of $1\frac{1}{2}$ inch gas pipe with a 2 inch stiffening sleeve placed over it, and in lengths of from $4\frac{1}{2}$ to 10 feet; while our extra heavy Brace, for use in wide and deep trenches, where they are required to stand a very heavy strain (as shown in view on page 3) is made of 2 inch gas pipe with a $2\frac{1}{2}$ inch stiffening sleeve and extra heavy castings, and in lengths from 8 feet up. All castings are made of malleable iron and thoroughly tested, and the screws of the best wrought iron.



Main Sewer on Wilkins Street, Allegheny, Pa., 12 feet in diameter, with 18 inch walls. 22 feet to flow line from surface, in running sand and gravel.

We furnished for this contract *100 extra heavy Braces*, 15 feet long.

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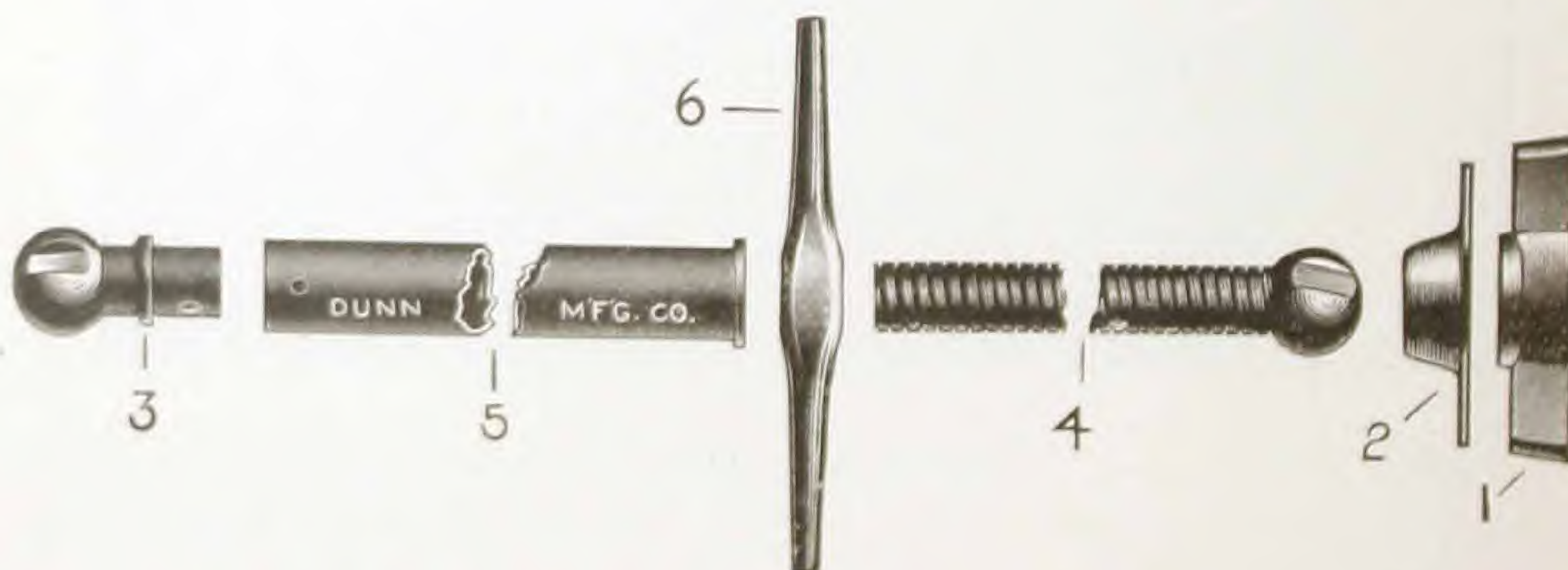
Cut No. 1.

Brace complete, when closed.



Cut No. 2.

Brace extended a few inches, and Shoes at an angle.



Cut No. 3.

PARTS OF BRACES.—No. 1, Shoe. No. 2, Ring. No. 3, Ball. No. 4, Screw. No. 5, Barrel. No. 6, Lever.

Price List Issued January, 1895.

DESTROY ALL PREVIOUS LISTS.

Brace Fittings	without Barrels, per doz.	\$ 26.00
EXTRA HEAVY Brace Fittings . .	" " "	44.00
All Braces 16 ins. to 4 1/2 ft. long, wit out Stiffening Sleeve "		30.00
5 feet long	wit " " "	34.00
5 1/2 " "	" " "	35.00
6 " "	" " "	36.50
6 1/2 " "	" " "	38.00
7 " "	" " "	40.00
7 1/2 " "	" " "	42.00
8 " "	" " "	44.00
8 1/2 " "	" " "	46.00
9 " "	" " "	48.00
9 1/2 " "	" " "	50.00
10 " "	" " "	52.00
8 " " Extra Heavy	" " "	64.00
9 " " " "	" " "	70.00
10 " " " "	" " "	76.00
11 " " " "	" " "	82.00
12 " " " "	" " "	88.00
13 " " " "	" " "	94.00
14 " " " "	" " "	100.00

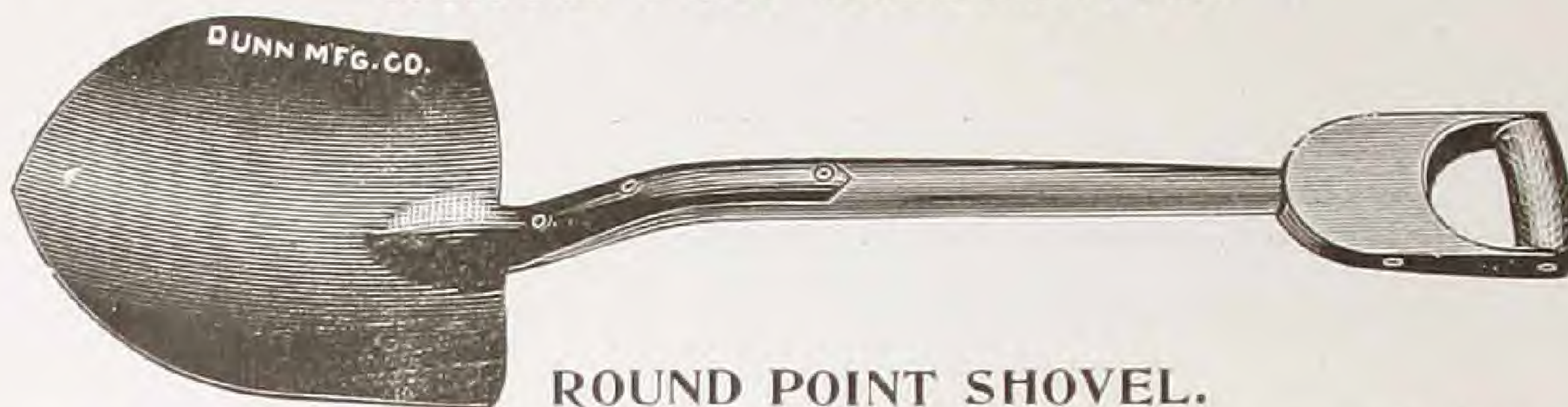
Special lenghts made to order.

Medium weight Braces are made with 20 inch screw and can be extended about 15 inches. Extra Heavy Braces are made with 27 inch screw and can be extended about 18 inches.

To calculate the length of Brace required, deduct thickness of planking to be used on both sides (which is usually about 10 inches) from width of trench.

Special Tools for Contractors.

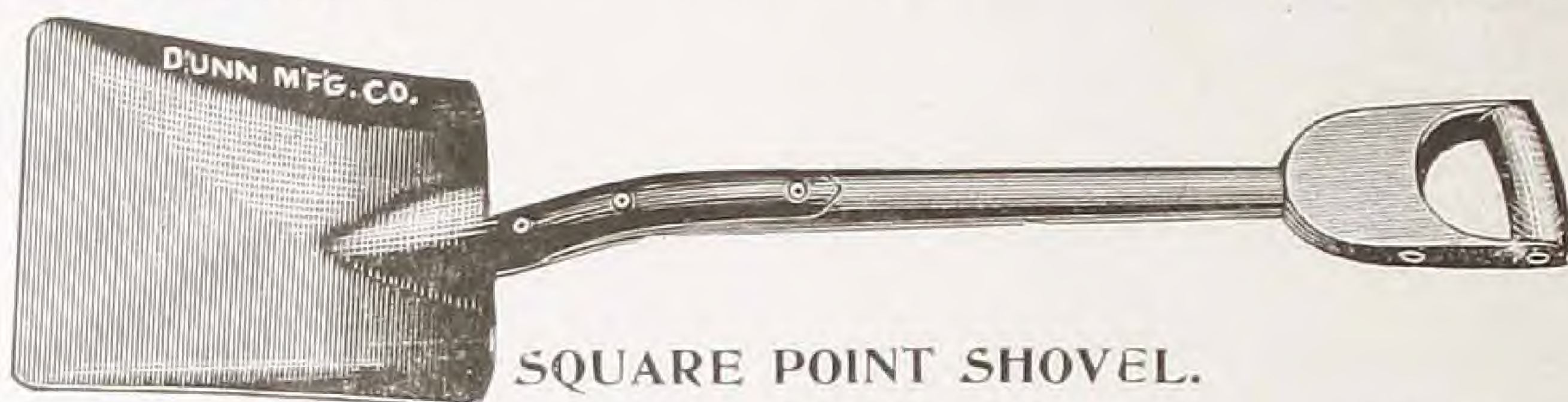
WRITE FOR DISCOUNTS.



ROUND POINT SHOVEL.

This shovel is superior to the Square Point Shovel for contractor's use, on account of the variety of material handled, the round point making it much easier to load. It is somewhat larger than the No. 2 Square Point Shovel, which adds greatly to its life.

No. 3, Black all steel	Per dozen, \$9.00
No. 3, Polished, all steel	Per dozen, 9.50



SQUARE POINT SHOVEL.

No. 2, Black, all Steel,	Per dozen, \$8.00
No. 2, polished, "	Per dozen, 8.50



Iron Rammer, with Pipe Handle.

Weight, 16 pounds.
Price . . . per dozen, \$10.00



Block Rammer, with Extra Tool-Steel End.

Standard Size.
Price . . . each, \$9 00



COBBLE RAMMER.

Standard Size.
Price . . . each, \$8.00



EXTRA STEELED PICKS.

This pick will wear three or four times as long as one purchased at hardware store. It is a well-known fact that the ordinary pick has to be relaid and resteeled before it is satisfactory. While the first cost of the above pick is slightly more than that of the ordinary pick they are much cheaper in the end, as the cost of relaying and resteeled is as much as the original cost of the pick.

Weight 7 pounds	Price per dozen, \$8.00
Weight 8 pounds	Price per dozen, 8.50
Weight 9 pounds	Price per dozen, 9.00



Sewer on Wilson Avenue, Allegheny, Pa., showing about 400 lineal feet of trench, 15 feet deep, opened, and braced with our Extensible Braces.

F. A. DUNHAM,
CIVIL AND CONSULTING ENGINEER,
109 Park Ave.

Specialties: Street Improvement, Sewerage and General
Municipal Engineering.

PLAINFIELD, N. J.

GENTLEMEN:

Your Extensible Brace for use in building sewers and all other work where deep trenching is necessary, I consider a very necessary addition to a contractor's outfit, I always advise the use of such a brace by contractors in charge of work under me, and in the future shall specify and insist on such a brace being used on all work over which I have supervision.

Yours truly,

F. A. DUNHAM.

Dictated.

MONONGAHELA CITY, PA.

THE DUNN MFG. CO., Pittsburg, Pa.

GENTLEMEN:

Your Extensible Sewer Brace has been used frequently on work with which I have been connected as engineer.

I have seen it in use in natural *clay, made ground, swamp-land, sand, gravel and quicksand*, and where the upper section of earth had to be supported while a *rock bottom* was blasted out. It is quickly and easily put in place without disturbing the walls of the trench, and is very convenient as a *scaffold support* where this is necessary. I know of no means of shoring both small pipe sewer trenches and large brick sewer excavations, at once, so speedy, economical and reliable as with your Brace.

Yours truly,

ALBERT SMITH, Civil Engineer.

OFFICE OF CITY ENGINEER.

PITTSBURGH, PA.

TO WHOM IT MAY CONCERN:

All our principal sewer contractors use the Extensible Brace for supporting excavations. It is invaluable to them and the city as well, in protecting water mains and other pipe lines paralleling the open sewer trench. Since this Brace has come into general use, we have yet to hear of a slip or caving in of a trench when they are properly adjusted.

W. R. BROWN, City Engineer.

Office of
GABOURY & NOBLE,
General Contractors.

MACON, GEORGIA.

THE DUNN MFG. CO., Pittsburg, Pa.

GENTLEMEN:

We are now using three dozen of your Extensible Sewer Braces that we bought second hand, and finding that they give satisfaction, we ask that you send by freight five (5) dozen of the 18-inch Screw Braces, complete, except the 1½-inch gas pipe, as we have some on hand. We will want a great many more, which we propose to order as needed, on our contract with the city for 44 miles of sanitary sewers.

Yours respectfully,

GABOURY & NOBLE.

DUNN & HASTINGS,
General Contractors.

ALLEGHENY, PA.

GENTLEMEN:

In the construction of the Superior Avenue six foot brick sewer, we are required to go to a depth of thirty-eight feet, the last eleven feet of which is hard rock, requiring heavy charges of dynamite, with the upper part, or earth portion, supported by your Extensible Braces, of which we have one hundred and fifty. With all the blasting there has not been one Brace knocked out, while if we had been using wood to support sides of trench there would have been no end to our trouble.

Yours respectfully,

DUNN & HASTINGS.

"TELEGRAM."

PASADENA, CALIFORNIA.

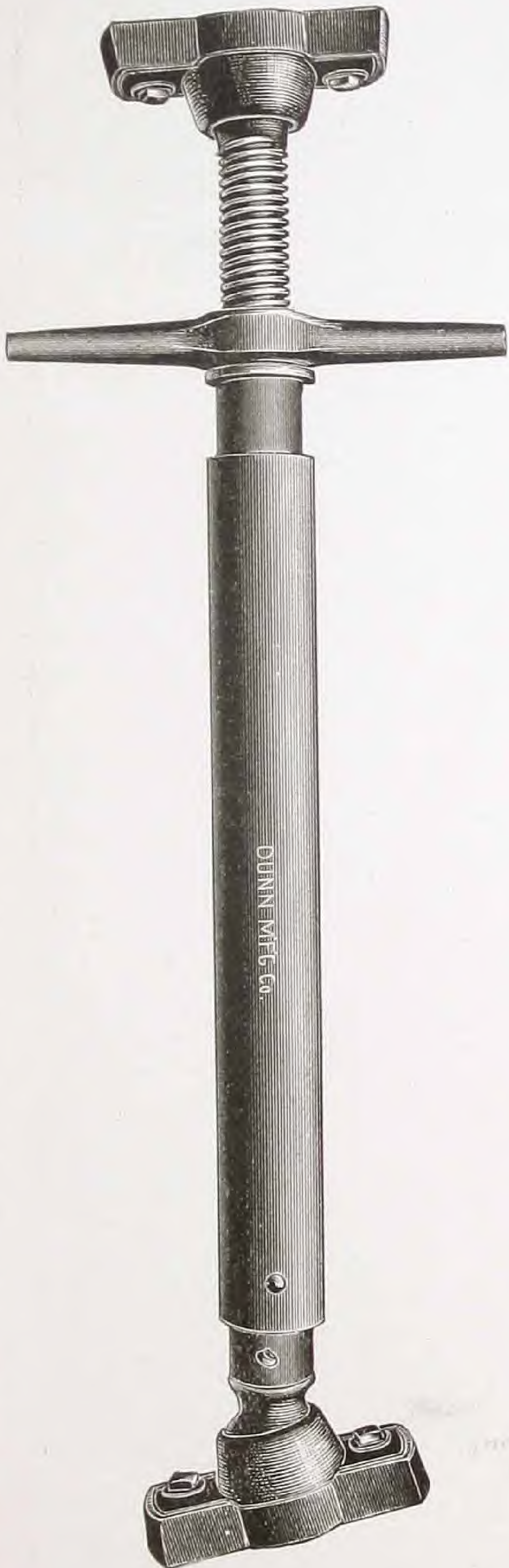
THE DUNN MFG CO.,
Pittsburg, Pa.,

Ship immediately to Los Angeles via Sunset route, care E. Hawley, New York, five dozen five, one dozen six, one dozen seven feet Extensible Braces.

HUGHES & MAYER.



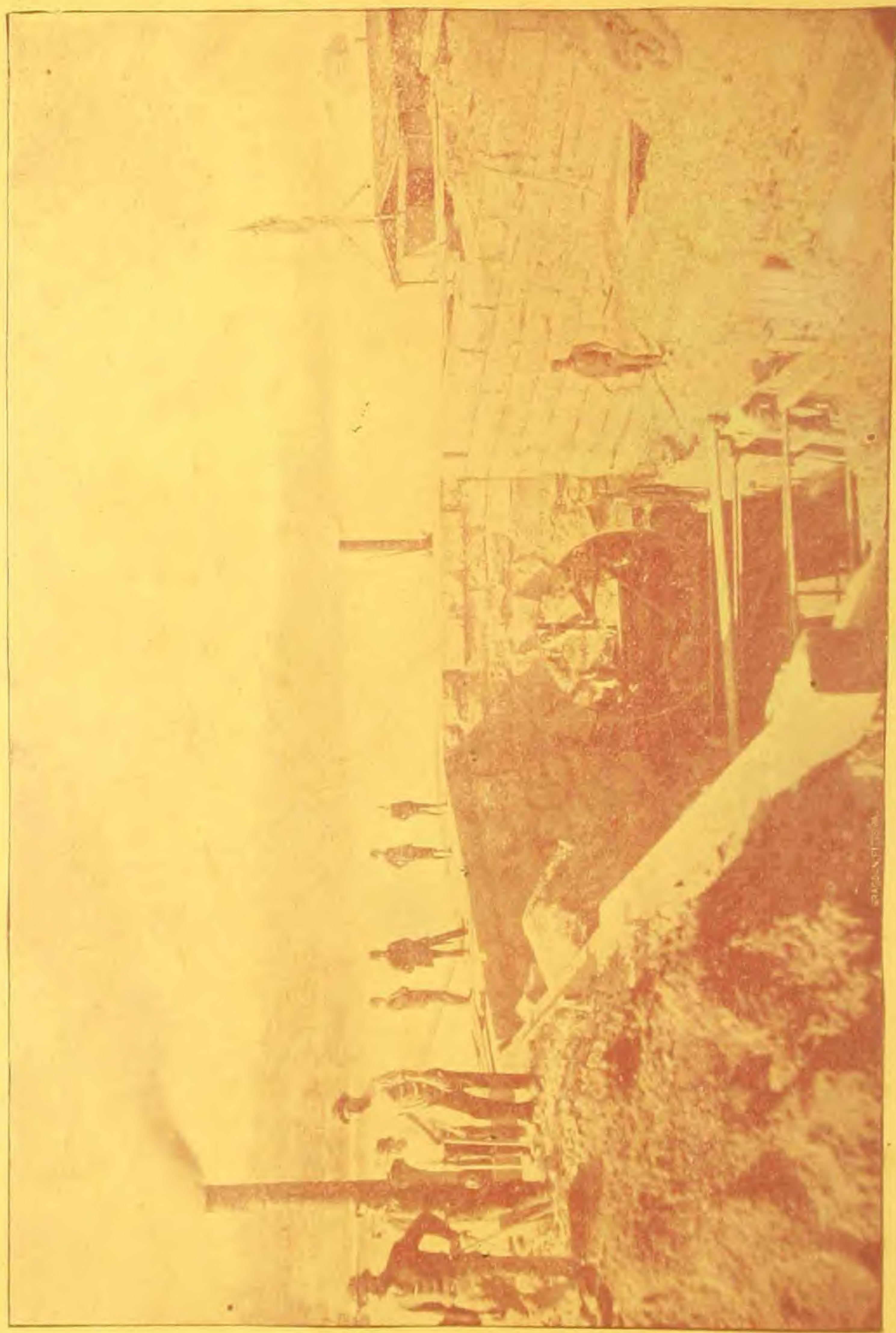
View of Ordinary Brace, made with 1½-inch barrel and in lengths of from 16 inches to 4½ feet. Medium brace is made same as Ordinary Brace, with 2-inch sleeve placed over barrel, and in lengths of from 4½ to 10 feet.



View of Extra Heavy Brace, showing 2½-inch sleeve placed over 2-inch barrel, made in lengths of from 8 feet up.



Main sewer on Hanover Street, Allegheny, Pa., 11 feet in diameter, 18-inch walls and 22½ feet to flow line. Photograph taken while going under main line of the Pittsburg, Ft. Wayne & Chicago Railroad with locomotive weighing 85 tons, directly over trench. We furnished for this contract 8½ dozen *extra heavy* Braces, 14 feet long.



Protecting Wall at outlet of Wilkins Avenue Sewer (Allegheny, Pa.) on Ohio River, containing 700 cubic yards of first-class masonry.